

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION OF: Zheng J. Li, et al.

Examiner: PESELEV, ELLI

APPLICATION NO.: 10/652,933

Group Art Unit: 1623

FILING DATE: AUGUST 28, 2003

TITLE: CRYSTAL FORMS OF AZITHROMYCIN

Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

Sir:

DECLARATION UNDER RULE §131

I, Richard Todd Darrington, declare that:

- 1. I received my Doctor of Philosophy degree in Pharmaceutical Chemistry from the University of Utah in December 1993.
- 2. Since December 1993, I have worked for Glaxo Inc., Pfizer, Inc. in Groton-CT and Boehringer Ingelheim to study new pharmaceutical formulations.
- 3. During my tenure at Pfizer, Inc. and prior to May 8, 1998, I participated in the conception and reduction to practice of a pharmaceutical composition containing substantially pure Form F azithromycin (referred to as "ethanol solvate Lot 34503-138-1" in the notebook which is attached herein as exhibit 1). Exhibit 1 includes two pages, one page from my notebook and one from that of William N. Soby who worked under my supervision at the time. Exhibit 1 is redacted as to the dates which all occurred before May 8, 1998.
- 4. Exhibit 1 describes a pharmaceutical composition containing ethanol solvate (Lot 34503-138-1) and a pharmaceutically acceptable carrier, Miglyol 812. The composition was made prior to May 8, 1998.

5. I further declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the Untied States Code and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

RICHARD TOOD DARRINGTON

EDH Solve 6st 3450J-138-1

Calculations for Mass of D	7	, , , , , , , , , , , , , , , , , , , ,			
		Drug	Molecular	Density	Percent
Drug Form (salt)	EtOH Solvate	Form	Weight	mg/mL	Purity
Lot Number	34503-138-1	1.			
		Azithromycin	785	1.132	92.
Percent Purity	91.9	Azithromycin HCl	821.5	1.170	100
Density (g/mL)	1.132	Azithromycin HCl	821.5	i	89.:
		Azithromycin 2HCl	858	1.178	10
Vehicle	Miglyol 812	Monopamoate Salt	1137.36		63.
Lot Number .		Monopamoate Salt	1137.36	1.577	61.8
		Monocamsylate Salt	981.31		
Desired Activity* (mg/mL)	100	Decanote	921.23	1.210	86.14
Target Volume (mL)	35.0	Mesylate Salt			88.6
MCD	2 0000				
Mass of Drug to Add	3.8089		<u> </u>		·
Volume Occupied by Drug	3.36	1	<u>l:</u>		
Volume of Vehicle to Add	31.64		1		

ARTA (vid 2) 3.8086 We distrated white recons oil and did not record. Sime we are low on Silverte do not have everyth to ne do will have to estante and use ARID pitally detamenting.

might 8/2 10g bull all uoi mipe 812 21.7/29

17.3513

17.2801

17.7722

4.1314

4.0303

4.4201

4.20

4.20

4.50

9.856

9.7633

9.7807

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THADENA

Nº 38548-, 32 Quek solubily Screen on New Salt (Continued from page 29)

	- Colo	Lot Namber	Empty Mass	Mass with	Mass of	Weighed Mass	Final
Vial	Selt	DOL TOWNS	of Visit (g)	Salt (g)	Selt (mg)	of Sult (mg)	Mass (g)
Vumber			<u> </u>		3.4		
			6.2250	6.2458	10.00	10.1516	6.493
1	CP-62,993-13	34503-140-1	6.2358 6.3848	 		·	10.193
2	CP-62.993-13	34503-140-1			<u></u>		6.429
3	CP-62,993-42	34503-143-1	6.3200				10.220
4	CP-62,993-42	34503-143-1	6.3375				10.10
5		34503-138-1	6.3127	11111111			8.84
6		34503-138-1					6.49
7	CP-62,993-42	34503-143-2	6.283				-
	CP-62.993-42	34503-143-2	6.309				
	CP-62,993-?	34503-138-2	6.290				
	CT (2.002.2	24503-138-2	6.315	9 6.326	71 10.8	10.027	+

6.3159

9.8518

9.7591

9.7762

CP-62,993-? 34503-138-1 Page 38548-32

CP-62,993-13 34503-140-1

CP-62,993-42 34503-143-1

CP-62,993-?

34503-138-2

	·			Calculated	Measured	Solvent	Solubility
Vial	Selt	Lot Number	Mass of		Volume (uL)		
			Solvent (E)	Volume Added (uL)	VO		
immber					250	Water	40.6
		24502 140-1	0.2481	249			
1	CP-62,993-13	34303-140-1	3.7984	4037	4000	Mighyol 812	105.7
2	CP-62,993-13	34303-140-1	0.0992			Water	
3	CP-62,993-42	34503-143-1				Miglyol 812	
4	CP-62.993-42	34503-143-1	3.577	2000	4000	Water	2.4
	CP-62,993-?	34503-139-1	3.77	240		Migtyol 812	4.
6	CP-62,993-7	34503-138-1	2.522			West	60.1
	CP-62,993-42	34503-143-2	0.197	401		Mighyol 81	2 2
	CP-62,993-42	34503-143-2	3.781	9			2.1
8	CP-62,993-7	34503-138-	4.167	8 419	<u> </u>	0 Miglyol 81	2 2.
9		34503-138-		9 401			
10	CP-62,993-7	3 347				0 Miglyol 81	2 0
		3 34503-140-	7.495	796	5 800	O Minhael 81	2 0
2a	CP-62,993-1					0 Mighyol 81	0
40	CP-62,993-4	2 34503-143-			35 800	O Water	
Sa	CP-62,993-?	34503-138	1.77	J			

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(A	t Continu	I on pay	33	
A	1.10	I II		Date
Signed	. / ~ <i>U</i>	e day		Date
Witnessed	A M	T. Jung		Date
Witnessed				